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ABSTRACT

This collection of lessons involves a sequence of 10 class sessions to give above average seventh-grade students an opportunity to use verbal, research, and creative skills in discussing the energy situation as it applies to their lives. The practice of English skills is emphasized in the lessons. A list of sources of free or inexpensive materials is provided. (RE)

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STUDENTS' SYMPATHETIC PARTICIPATION IN THE ENERGY CRISIS

by Paula Hudson

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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For more information on this teacher's unit or others, contact:

Mississippi Energy Extension Center
P.O. Box 5406
Mississippi State, MS 39762
(601) 325-3137

TITLE: Students' Sympathetic Participation in the Energy Crisis

UNIT RATIONALE:

To give students an opportunity to use their verbal, research, and creative skills in discussing the energy crisis as it applies to their lives.

SUGGESTED SUBJECT AREA:

English - 7th grade - second semester

DESCRIPTION OF STUDENTS

Above average, seventh grade

MATERIALS NEEDED:

Films on conservation to be ordered in enough time to use with unit. Addresses at the end of unit in resource list.

GOALS:

The students will learn about conserving energy in their own lives while practicing English skills.

INTRODUCTORY CONTENT:

Because of the present energy crisis, it is necessary for all citizens of the United States to realize the seriousness of our shortage. In order to make supplies last longer, energy consumers must control their excess usage. English teachers can introduce these ideas into lesson plans, while still proceeding with the business of writing, reading, researching, and oral presentations. The students will need to write for pamphlets and information. Also, the teacher will need to order films and other materials ahead of time. The names and addresses for the films and pamphlets are at the end of this unit. Also, the teacher may find many helpful addresses in the free booklet "A Teacher's Guide to Free and Inexpensive Materials on Energy," available from the Mississippi Energy Extension Center, P. O. Box 5406, Mississippi State, MS 39762.

PREREQUISITE SKILLS NEEDED:

1. Students are able to write business letters.
2. Students are able to write three point paragraphs using correct punctuation.
3. Students are able to use oral skills.

INSTRUCTIONAL PLAN

DAY 1

Objective:

Each student will write a letter to gather information on the present energy crisis.

Materials Needed:

Address list (attached), unlined paper and envelopes, scratch paper, fifteen cents for stamp.

Activity:

Each student must write a rough draft and a final copy of a business letter requesting information on energy conservation or the energy crisis.

Instructions to Student:

(Suggested remarks) In a few weeks we are going to study energy conservation and the energy crisis. It will be necessary for you to keep this in mind as you write your business letters today. You will be requesting information from the addresses on the list in front of you. Please write a rough draft on scratch paper. Have a neighbor look over your completed letter to check for punctuation, spelling and grammatical errors. (Note to teacher, if you have time, you may want to check over the students' drafts). After you have corrected your rough draft, proceed with your final copy and your addressed envelope using your own address. Mail the letter tonight.

Evaluation:

The student's letter will be evaluated. All students who turn in a letter will be given an A if the letter is neatly written and contains no errors. If the letter is returned to the student for further corrections, his grade is lowered. A second chance is given in order to turn in an acceptable letter.

DAY 2

Objective:

Students will discuss ways of saving energy on a personal level; students will write paragraphs on conserving energy.

Materials Needed:

The teacher should order in advance a film on conservation such as Our Part in Conservation, color, 11 minutes, (see resource list). Students need paper and pens.

Activities:

1. Students will view a film in order to learn information on energy conservation.
2. After film, discussion on ways of personally conserving energy is conducted.
3. Teacher lists ideas which will be used as guides for paragraph writing. Teacher tells students to begin a three-point paragraph (i.e., introduction, three supporting points, and conclusion).
4. Students begin rough draft of paragraphs, to be left with teacher until next class meeting.
5. Other students and/or the teacher should review the rough drafts for errors.

Evaluation:

Each student should contribute at least one energy-saving method to the discussion.

DAY 3

Objective:

Students will demonstrate an awareness for energy conservation by choosing and designing a creative project on energy.

Materials Needed:

Teacher - list of creative projects. Students - paper and pens.

Activities:

1. Students will be given a list of creative projects.

   -- "Energy Conservation" posters - each one should choose a specific energy resource (gas, electricity, fuel) and illustrate some key way in which that form of energy can be conserved by the individual. The poster is brought to class in conjunction with a 3-4 minute explanatory speech.

   -- A shoe box diorama: Use illustrations from magazines or pamphlets. Mount them on cardboard and organize them in a shoe box or small enclosure to demonstrate some important moment in energy history. (For example, discovery of wind power, the first oil well, the invention of the steam engine, the use of coal during the Industrial Revolution, cavemen using animal power, etc.). This must be explained in a 3-4 minute speech.

   -- Energy collage - use magazine pictures and newspaper articles dealing with the energy crisis, energy resources, or new developments in the field of energy. Tear the illustrations with your hands so that they have a ragged appearance on the edge. Paste them down on a large piece of heavy cardboard or chipboard. When finished, brush a clear coat of lacquer or liquid paste on them.

2. Teacher should explain projects and writing methods for short speech (4 minutes, maximum) which is to accompany project. This project will be due on days 9 and 10 of this unit.

3. Students should be given rough drafts of paragraphs which will be returned to teacher. Instructions to students (suggested remarks): Have a neighbor look over your rough draft to find mistakes. Write your final paper to be turned in to me.

Evaluation:

The student's paragraph should be evaluated using pre-set criteria (e.g., no punctuation, grammar, or spelling mistakes; introduction, three supporting points and conclusion).

Directions for project:

Choose one idea, create the project, then prepare to explain it to the class in a 3-4 minute speech at the end of the unit.

DAY 4

Objective:

Students will read their paragraphs on energy conservation aloud.

Activities:

1. Return paragraphs written on previous day. Students can read paragraphs aloud. Hold an informal discussion on the ideas the students had.

2. Write the suggested "Reading Aloud Chart" on the blackboard or pass out copies. Explain to students that this chart forms the basis for evaluation.

Reading Aloud Chart

	1	2	3	4
1. Good eye contact				
2. Stood properly				
3. Spoke distinctly				
4. Correct pronunciation				
5. Held paper away from face				

1 = Excellent
2 = Good
3 = Fair
4 = Poor

Instructions to student (suggested remarks):

"Remember the qualities of reading aloud at the speaker's stand. Speak distinctly, look at your audience as much as possible and stand up straight. The podium is for holding the paper, not the student." Remind students to bring all pamphlets and information on energy for class use during the next class meeting. Information should be left in the room for browsing to generate interest.

DAY 5

Objective:

Students will be able to state facts about the energy crisis.

Activities:

1. Students will view the slide show, "Energy Awareness," which is available from the Mississippi Energy Extension Center, P. O. Box 5406, Mississippi State, MS 39762.

2. As students are viewing the presentation, ask them to take notes about the important concepts and ideas which are discussed in the show.

3. Remind students to bring collected energy information to use for Day 6.

DAY 6

Objective:

Students will identify energy words by using a puzzle.

Instruction to students:

(Suggested remarks) - The cryptoglyphic puzzle is for fun, but it will familiarize you with the energy vocabulary. After ten minutes, we will see how far you have gone and check them in class. If you will recall the guides for a good discussion, you will remember that we must have a leader who can keep the discussion moving, keep the speakers to the point, and keep the discussion from becoming an angry argument. We will also need a secretary who might record the major points which will be used in the leader's summary. Elect someone you feel could fit these qualifications.

Break into (predetermined) your own groups and begin writing down important acts and ideas for the upcoming discussion.

Materials needed:

Cryptoglyphics puzzle; students bring in materials gathered by writing letters and other sources.

Evaluation:

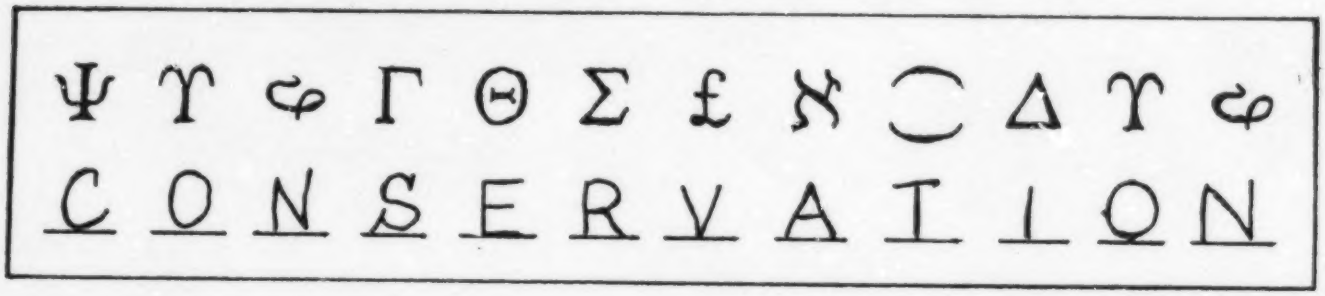
Each student should turn in the puzzle.

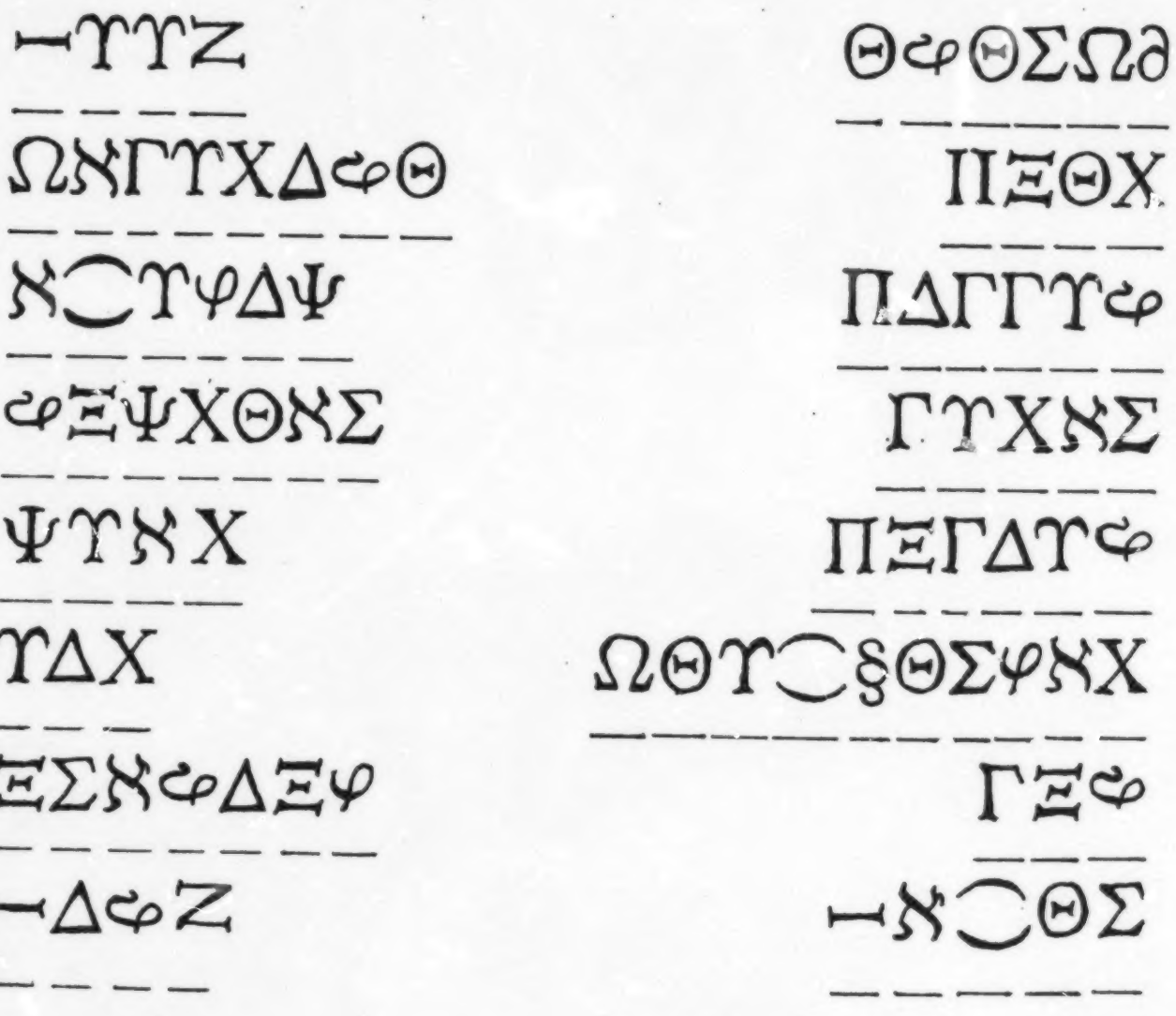
Answer key to cryptoglyphic puzzle

1. wood
2. gasoline
3. atomic
4. nuclear
5. coal
6. oil
7. uranium
8. wind
9. energy
10. fuel
11. fission
12. solar
13. fusion
14. geothermal
15. sun
16. water

cryptoglyphics

A famous archaeologist has discovered some hieroglyphics on an ancient tablet. He found a clue that told him the tablet was about conservation and the sources of energy. Can you figure out the words on the tablet?





DAY 7

Objective:

Each student will identify ways to conserve energy.

Materials needed:

Slide set, "Wilma, the Wise Owl," handouts, paper and pens

Activities:

1. Teacher will present the "Wilma, the Wise Owl" slide show on home energy conservation. (Note: address given in resource list. Handouts accompany presentation. Script is included for teacher to use for making the oral presentation. The teacher may want to practice it first).

2. Pass out copies of the attached handout on "Wilma, the Wise Owl." Students should complete this handout and turn in for evaluation.

3. After the slide presentation, students break up into groups to finalize their information gathering for next day's discussion.

4. Teacher will monitor groups. (This will serve as evaluation.)

DAY 8

Objective:

Students will identify energy conservation methods.

Materials needed:

Teacher - paper and pen; Students - paper and pens, energy information.

DAYS 9 & 10

Objective:

Students will each present a 3-4 minute speech to accompany their creative projects.

Materials needed:

Students - prepared speeches, creative projects

Activities:

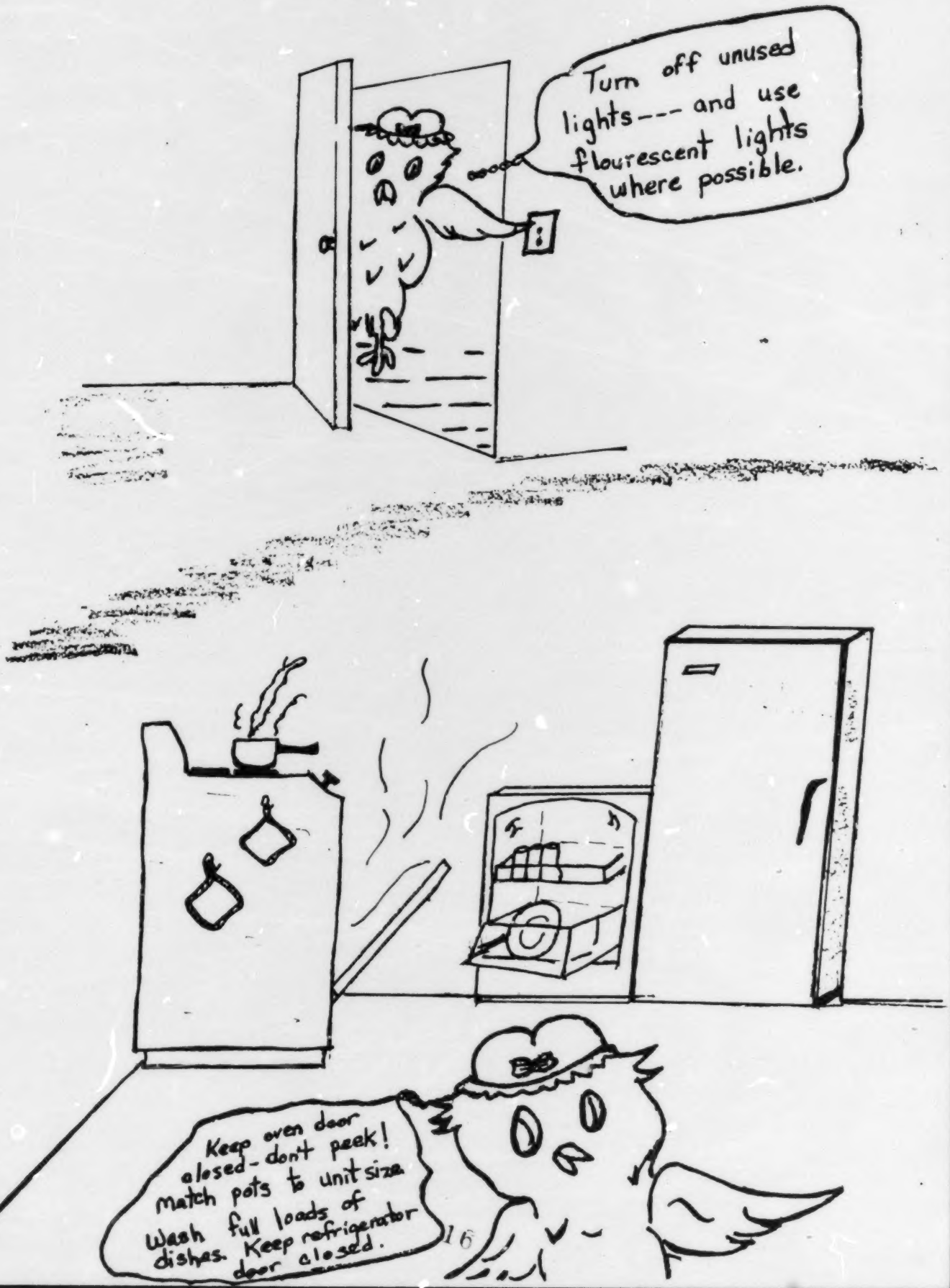
1. Students will present their creative projects accompanied by a three to four minute speech.

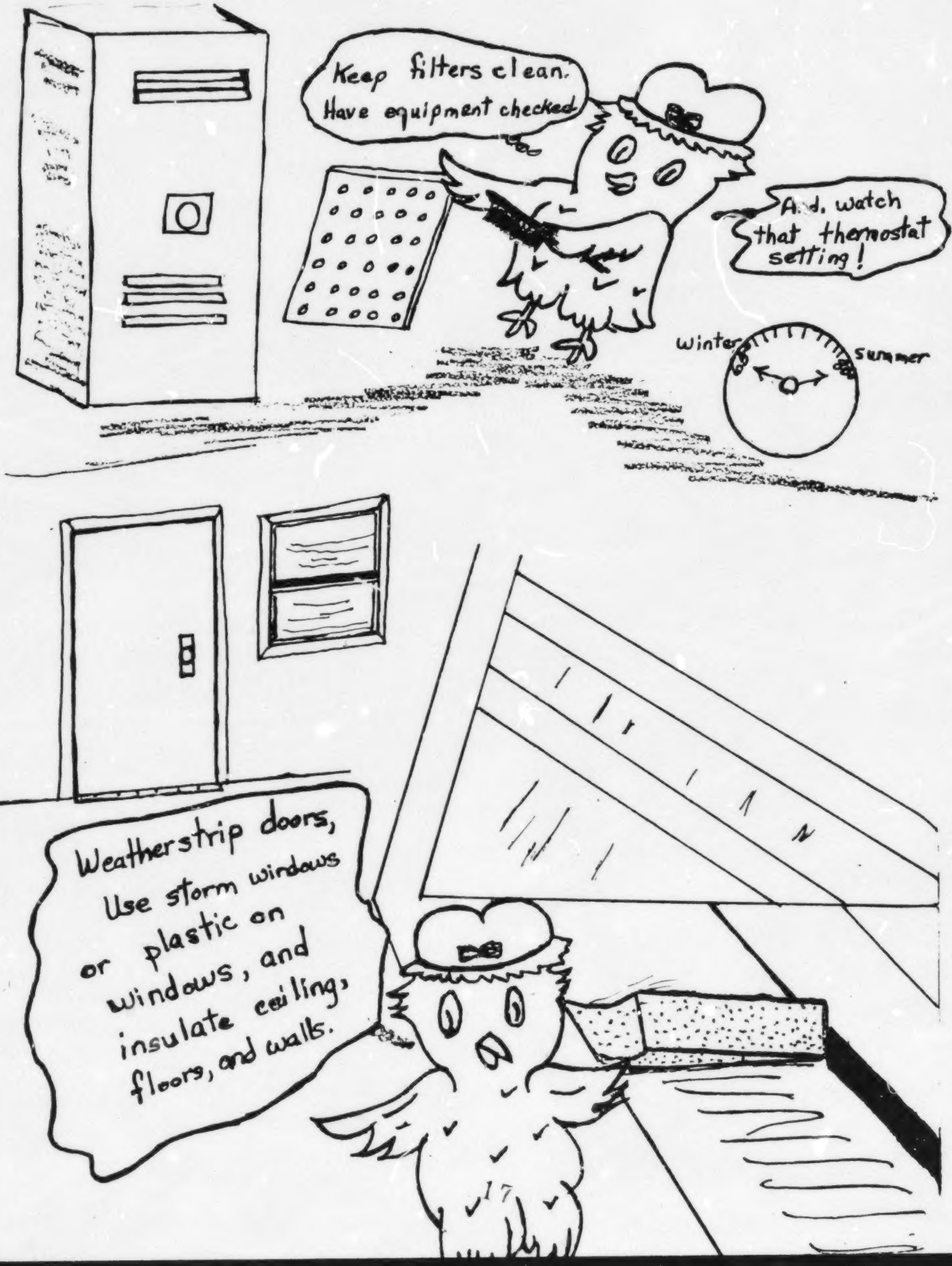
2. A "Speech Chart" is given below to guide the teacher in his or her evaluation of the student's work. It is for both the oral skills and the creative projects. You can add other skills to be evaluated which you have incorporated into your instruction for this unit.

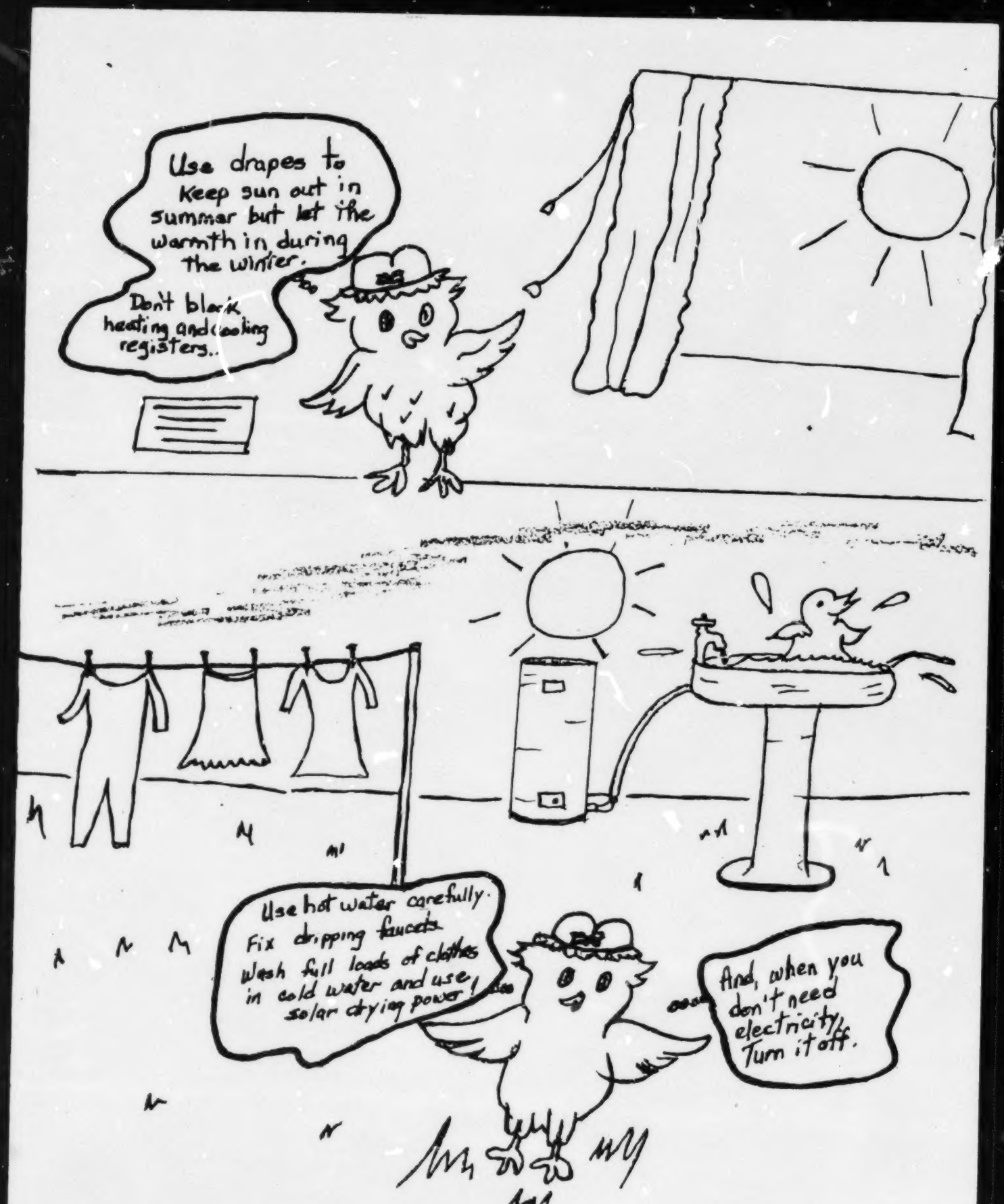
	Excellent 1	Good 2	Fair 3	Poor 4	Very Poor 5
1. Good eye contact					
2. Stood properly					
3. Knew what to do with hands					
4. Spoke distinctly					
5. Explained project clearly					
6. Correct pronunciation					
7. Included energy conservation information in his content					
8. Shows creativity and time spent on project					

Hi, I'm Wilma!
Hope you'll color along with our energy saving helps.
Can you read your meter? Do you read it each day? Try reading it each day at the same time to see your KWH use.

Time _____ Day _____ Reading each day _____ Difference (KWH used)


Turn off unused lights--- and use flourescent lights where possible.
Keep oven door closed- don't peek! Match pots to unit size Wash full loads of dishes. Keep refrigerator door closed.


Keep filters clean. Have equipment checked.
And watch that thermostat setting!
winter
summer
Weatherstrip doors, Use storm windows or plastic on windows, and insulate ceiling, floors, and walls.


Use drapes to keep sun out in summer but let the warmth in during the winter.
Don't block heating and cooling registers..
Use hot water carefully. Fix dripping faucets. Wash full loads of clothes in cold water and use solar drying power.
And, when you don't need electricity, Turn it off.

Prepared by Member Service Dept., Dixie Electric Power Association

Available Resources - Free and Inexpensive Materials

Publications

A Teacher's Guide to Free and Inexpensive Materials
Mississippi Energy Extension Center
P. O. Box 5406
Mississippi State, MS 39762

"Citizens' Workshops on Energy and the Environment Handbook"
Office of Public Affairs
Communications Services
U. S. Department of Energy
Washington, DC 30585

"Cut Energy Costs: Keep Cool/Warm with Clothing" - Sheet 968
Mississippi Cooperative Extension Service
Mississippi State University
Mississippi State, MS 39762

"Electric Heat Pump"
Tennessee Valley Authority
Mr. Bob Rice, Field Representative
Box 470
Tupelo, MS 38801

"Electric Savings"
Tennessee Valley Authority
Mr. Bob Rice, Field Representative
Box 470
Tupelo, MS 38801

"Facts on Energy Use and Conservation for Refrigerator-Freezers"
Association of Home Appliance Manufacturers
20 North Wacker Drive
Chicago, IL 60606

"How to Save on Utilities" - Sheet 580
Mississippi Cooperative Extension Service
Mississippi State University
Mississippi State, MS 39762

"Insulate for Savings and Comfort"
Tennessee Valley Authority
Mr. Bob Rice, Field Representative
Box 470
Tupelo, MS 38801

"Kitchen Energy Cuts" - Sheet 912
Mississippi Cooperative Extension Service
Mississippi State University
Mississippi State, MS 39762

"Laundry Techniques to Save Energy" - Sheet 1060
Mississippi Cooperative Extension Service
Mississippi State University
Mississippi State, MS 39762

"Our Energy Problems and Solutions"
Kitty Borah, Special Services
Shell Oil Company
P. O. Box 2463
Houston, TX 77001

"Save Your Dollar Leaks" - Sheet 887
Mississippi Cooperative Extension Service
Mississippi State University
Mississippi State, MS 39762

"Skirting Your House to Improve Comfort" - Sheet 782
Mississippi Cooperative Extension Service
Mississippi State University
Mississippi State, MS 39762

"The Energy Primer"
Tennessee Valley Authority
Mr. Bob Rice, Field Representative
Box 470
Tupelo, MS 38801

"The Energy Savings Book"
Mississippi Valley Gas Company
Main Street
Starkville, MS 39759

"The Light Book"
General Electric
Residential Lighting Specialists
Nela Park
Cleveland, OH

"30 Ways to Cut the Cost of Heating Your Home"
Tupelo Water and Light Department
P. O. Box 588
Tupelo, MS 38801

Other Materials

"Basic Environmental Awareness" (slide set)
Available from
Dr. Jack W. Carroll
Extension Environmental Specialist
P. O. Box 5406
Mississippi State University
Mississippi State, MS 39762

"Our Part in Conservation" (film)
McGraw-Hill Text Films
330 West 42nd Street
New York, NY 10018

"Wilma the Wise Owl" (slide set)
Available from
Dr. Jack W. Carroll
Extension Environmental Specialist
P. O. Box 5406
Mississippi State University
Mississippi State, MS 39762

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